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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/772,792	02/05/2004	Phillip C. Cagle	200316243-1	5227

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EXAMINER	
NILAND, PATRICK DENNIS	
ART UNIT	**PAPER NUMBER**
1796	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/772,792	CAGLE, PHILLIP C.	
	Examiner	Art Unit	
	Patrick D. Niland	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 August 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *12-16,18,23,25-30,32,37 and 39-44* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *12-16,18,23,25-30,32,37 and 39-44* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

1. The amendment of 8/15/07 has been entered. Claims 12-16, 18, 23, 25-30, 32, 37, and 39-44 are pending.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 12-17, 23, 25-31, 37, and 39-44 are rejected under 35 U.S.C. 102(e) as being anticipated by Wang et al. (U.S. 2004/0063807) in view of the evidence given in Hawley's Condensed Chemical Dictionary.

Wang et al. disclose system for printing images comprising ink jet ink, non-porous substrate such as metal, plastic or glass, thermal printer, and heating element for heating the image once it is printed onto the non-porous substrate. It is disclosed that the ink comprises aqueous liquid vehicle, 10-60% volatile cosolvent having boiling point less than 285 °C, i.e. ethylene glycol methyl ether, propylene glycol methyl ether, triethylene, diethylene, or ethylene glycol (humectant), etc., silicone surfactant or fluorine surfactant, and polymer latex, i.e. acid functionalized polymer colloid particulates, dispersed in the liquid vehicle wherein the polymer is formed from less than 50 mol% hydrophilic monomer such as (meth)acrylic acid and is obtained from crosslinking monomer, i.e. divinylbenzene or trimethylolpropane triacrylate. Given that the polymer is obtained from hydrophilic monomer such as (meth)acrylic acid, it is clear that the polymer would have acid group on its surface. There is no requirement that the ink comprise non-volatile solvent. It is disclosed that the heating element heats the printed image to

temperatures of 50-150 °C which includes temperatures that would inherently drive off the volatile solvent as presently claimed which would inherently improve image permanence as presently claimed. For instance, given that it is well known, as evidenced by Hawley's Condensed Chemical Dictionary (page 470), that ethylene glycol methyl ether has boiling point of 124.5 °C, it is clear that when the image is heated at 50-150 °C, the solvent, i.e. ethylene glycol methyl ether, will be driven off as required in present claim 39. There is also disclosed method of printing an image with good rub resistance comprising ink jetting from the printer the ink onto substrate followed by heating the printed image (paragraphs 7, 14-19, 21, 23 (lines 3-4), 33 (lines 1-5 and last 7 lines), 42-45, 47, 51, 53 (line 4), 54, and 103).

The recitations regarding surface acid groups would be necessarily expected of the polymers of the reference in the above discussed aqueous phase. The ionic/hydrophilic groups of dispersions orient toward the hydrophilic aqueous phase and the hydrophobes orient away from the hydrophilic aqueous phase as is well known and established in aqueous dispersion arts. Thus, the acid groups of the reference polymer are expected to necessarily and inherently give the instantly claimed surface acid groups. The PTO has no facilities to make such experimental determinations. The burden is therefore on the applicant to show that the reference polymer does not have such surface acid groups necessarily and inherently. The newly presented claims 41-44 present limitations that appear to be a function of the polymer type and identity of the examined claims. The densities appear typical of organic polymers. The ionic surfaces of the acid functional polymers will be conductive due to the ions on them which will necessarily and inherently give very low surface dielectric constants. The burden is therefore on the applicant to show that the reference polymer does not have the instantly claimed densities and surface

dielectric constants necessarily and inherently. The reference is otherwise silent regarding these parameters and the examiner has no way of determining what they are otherwise. The argument that no acid monomer containing latex is exemplified is not persuasive in that the reference is not limited to its examples and is not even required to have examples. Sections [0042]-[0043] encomapass the claimed amount of acid monomer. It is not seen that the milling media of section [0024] or the polymeric disperant of section [0026] does not encapsulate the pigments.

The applicant's arguments have been fully considered but do not overcome the rejection above for the reasons stated above. This rejection is therefore maintained.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in Graham v. John Deere Co., 383 U.S. 1,148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art. 2. Ascertaining the differences between the prior art and the claims at issue. 3. Resolving the level of ordinary skill in the pertinent art. 4. Considering objective evidence present in the application indicating obviousness or

nonobviousness.

5. Claims 12-17, 23, 25-31, 37, and 39-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al. (U.S. 2004/0063807) in view of the evidence given in Hawley's Condensed Chemical Dictionary.

Wang et al. disclose system for printing images comprising ink jet ink, non-porous substrate such as metal, plastic or glass, thermal printer, and heating element for heating the image once it is printed onto the non-porous substrate. It is disclosed that the ink comprises aqueous liquid vehicle, 10-60% volatile cosolvent having boiling point less than 285 °C, i.e. ethylene glycol methyl ether, propylene glycol methyl ether, triethylene, diethylene, or ethylene glycol (humectant), etc., silicone surfactant or fluorine surfactant, and polymer latex, i.e. acid functionalized polymer colloid particulates, dispersed in the liquid vehicle wherein the polymer is formed from less than 50 mol% hydrophilic monomer such as (meth)acrylic acid and is obtained from crosslinking monomer, i.e. divinylbenzene or trimethylolpropane triacrylate. Given that the polymer is obtained from hydrophilic monomer such as (meth)acrylic acid, it is clear that the polymer would have acid group on its surface. There is no requirement that the ink comprise non-volatile solvent. It is disclosed that the heating element heats the printed image to temperatures of 50-150 °C which includes temperatures that would inherently drive off the volatile solvent as presently claimed which would inherently improve image permanence as presently claimed. For instance, given that it is well known, as evidenced by Hawley's Condensed Chemical Dictionary (page 470), that ethylene glycol methyl ether has boiling point of 124.5 °C, it is clear that when the image is heated at 50-150 °C, the solvent, i.e. ethylene glycol methyl ether, will be driven off as required in present claim 39. There is also disclosed

method of printing an image with good rub resistance comprising ink jetting from the printer the ink onto substrate followed by heating the printed image (paragraphs 7, 14-19, 21, 23 (lines 3-4), 33 (lines 1-5 and last 7 lines), 42-45, 47, 51, 53 (line 4), 54, and 103). In light of the above, it is clear that Wang et al. anticipates the present claims. The recitations regarding surface acid groups would be necessarily expected of the polymers of the reference in the above discussed aqueous phase. The ionic/hydrophilic groups of dispersions orient toward the hydrophilic aqueous phase and the hydrophobes orient away from the hydrophilic aqueous phase as is well known and established in aqueous dispersion arts. Thus, the acid groups of the reference polymer are expected to necessarily and inherently give the instantly claimed surface acid groups. The PTO has no facilities to make such experimental determinations. The burden is therefore on the applicant to show that the reference polymer does not have such surface acid groups necessarily and inherently. The newly presented claims 41-44 present limitations that appear to be a function of the polymer type and identity of the examined claims. The densities appear typical of organic polymers. The ionic surfaces of the acid functional polymers will be conductive due to the ions on them which will necessarily and inherently give very low surface dielectric constants. The burden is therefore on the applicant to show that the reference polymer does not have the instantly claimed densities and surface dielectric constants necessarily and inherently. The reference is otherwise silent regarding these parameters and the examiner has no way of determining what they are otherwise. The argument that no acid monomer containing latex is exemplified is not persuasive in that the reference is not limited to its examples and is not even required to have examples. Sections [0042]-[0043] encomapass the claimed amount of acid

monomer. It is not seen that the milling media of section [0024] or the polymeric disperant of section [0026] does not encapsulate the pigments.

It would have been obvious to one of ordinary skill in the art at the time of the instantly claimed invention to use the instantly claimed combinations of ingredients in the ink of Wang because they are encompassed by Wang, as discussed above, and would have been expected to give the printing system of Wang and its disclosed properties. No unexpected results are seen which are commensurate in scope with the instant claims and the cited prior art.

6. Claims 12-16, 18, 23, 25-30, 32, 37, and 39-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al. (U.S. 2004/0063807) in view of Miyabayashi (U.S. 2004/0229974).

The disclosure/rejection with respect to Wang et al. in paragraph 3 above is incorporated here by reference.

The difference between Wang et al. and the present claimed invention is the requirement in the claims of specific amount of crosslinking monomer.

Wang et al. disclose that the polymer is obtained from crosslinking monomer, however, there is no disclosure of the amount of crosslinking monomer utilized.

Miyabayashi, which is drawn to ink jet ink, discloses the use of polymer fine particles in the form of resin emulsion, i.e. acid functionalized polymer colloid particulates, where the resin has acid groups on its surface and is formed from 1-10% acid monomer and 0.2-4% crosslinking monomer wherein the motivation for using 0.2-4% crosslinking monomer is in order to improve ejection stability (paragraph 334-336 and 354).

In light of the motivation for using specific amount of crosslinking monomer disclosed by Miyabayashi as described above, it therefore would have been obvious to one of ordinary skill in the art to utilize polymer obtained from that amount of crosslinking monomer in the ink of Wang et al. in order to produce ink with improved ejection stability, and thereby arrive at the claimed invention.

Applicant's argument regarding the instantly claimed encapsulated pigment with the instantly claimed acid containing polymer is addressed in paragraph 3 above. The examiner's arguments in this regard also apply here. Wang encompasses the combination, as discussed in paragraph 3 above.

The applicant has shown no unexpected results stemming from the instantly claimed combinations of ingredients in a manner commensurate in scope with the cited prior art and the instant claims.

7. Claims 12-15, 17-18, 23, 25-29, 31-32, 37, and 39-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kubota et al. (U.S. 2003/0069329) in view of Hawley's Condensed Chemical Dictionary and either Kato et al. (U.S. 6,536,890) or Moffatt et al. (U.S. 5,207,824).

Kubota et al. disclose system for printing images comprising ink jet ink, ink jet printer, non-porous substrate, and heating element. It is disclosed that the ink jet ink comprises aqueous liquid vehicle comprising 0.5-40% volatile co-solvent having boiling point below 285 °C, i.e. ethanol, diethylene glycol (humectant), etc., resin emulsion, i.e. acid functionalized polymer colloid particulates, dispersed in the liquid vehicle where the resin has functional groups on its surface including carboxyl groups and is formed from 0.2-4% crosslinking monomer, and pigment dispersed in the liquid vehicle wherein the pigment is polymer encapsulated pigment.

There is no requirement that the ink comprise non-volatile solvent. Given that it is well known, as evidenced by Hawley's Condensed Chemical Dictionary (page 459), that ethanol has boiling point of 78.3 °C, it is clear that when the image is heated at 80 °C, the solvent, i.e. ethanol, will be driven off as required in present claim 39. There is also disclosed method wherein the ink is ejected onto non-porous substrate such as glass, plastic, or coated paper from printer followed by heating the printed image at 80 °C (paragraphs 24-29, 36, 40, 72, 80-81,101-102, 112-113, 115 (lines 1-4), 117, 166-167, 178, 228-230, 253,263-264-550-551,555-558, and 565). Attention is drawn to Ink 4 in Table F2 which discloses ink comprising polymer encapsulated pigment, resin emulsion wherein the resin is obtained from 3% acid monomer and 0.4% crosslinking monomer, and volatile solvent having boiling point below 285 °C, i.e. glycerin, diethylene glycol, and N-methyl-2-pyrrolidone, and to Table F5 which discloses that such ink has good rub resistance

The difference between Kubota et al. and the present claimed invention is the requirement in the claims of the use of thermal ink jet printer.

Kubota et al. discloses the use of ink jet printer, however, there is no specific disclosure of thermal ink jet printer.

Kato et al., which is drawn to ink jet ink, disclose the use of thermal ink jet printer wherein the ink is ejected on stable basis with no satellite dots produced (col.26, lines 19-25).

Alternatively, Moffatt et al., which is drawn to ink jet ink, disclose the use of thermal ink jet printer given that this printer offers a low cost, high print quality, comparatively noise-free option to other types of printers (col. 1, lines 12-14).

In light of the motivation for using thermal ink jet printer disclosed by Kato et al. or Moffatt et al. as described above, it therefore would have been obvious to one of ordinary skill in the art to use such printer as the printer in Kubota et al. in order to stably print ink and produce no satellite dots or alternatively, in order to print noise free with low cost and high print quality, and thereby arrive at the claimed invention.

Specifically, applicant argues that Kubota et al. fails to disclose printing ink jet ink comprising polymer encapsulated pigment and acid functionalized colloid particulates dispersed in liquid vehicle having volatile co-solvent wherein the image is heated afterprinting. As evidence to support this position, applicant points to examples of Kubota et al. that show ink comprising polymer encapsulated pigment but wherein such ink is not heated after printing or that show ink that is heated after printing but wherein the ink does not comprise polymer encapsulated pigment.

However, the examples are but a few preferred embodiments of Kubota et al. It is noted, "applicant must look to the whole reference for what it teaches. Applicant cannot merely rely on the examples and argue that the reference did not teach others," In re Courtright, 377 F.2d 647, 153 USPQ 735,739 (CCPA 1967). Further, "nonpreferred disclosures can be used. A nonpreferred portion of a reference disclosure is just as significant as the preferred portion in assessing the patentability of claims", In re Nehrenberg, 280 F.2d 161,126 USPQ 383 (CCPA i 960). A fair reading of Kubota et al. as a whole clearly discloses ink comprising polymer encapsulated pigment (paragraph 72), acid functionalized colloid particles (paragraphs 102, 112, and 117), and liquid vehicle (paragraphs 162-168) as presently claimed wherein the image formed from such ink is heated after printing (paragraphs 35 and 230).

The recitations regarding surface acid groups would be necessarily expected of the polymers of the reference in the above discussed aqueous phase. The ionic/hydrophilic groups of dispersions orient toward the hydrophilic aqueous phase and the hydrophobes orient away from the hydrophilic aqueous phase as is well known and established in aqueous dispersion arts. Thus, the acid groups of the reference polymer are expected to necessarily and inherently give the instantly claimed surface acid groups. The PTO has no facilities to make such experimental determinations. The burden is therefore on the applicant to show that the reference polymer does not have such surface acid groups necessarily and inherently. The newly presented claims 41-44 present limitations that appear to be a function of the polymer type and identity of the examined claims. The densities appear typical of organic polymers. The ionic surfaces of the acid functional polymers will be conductive due to the ions on them which will necessarily and inherently give very low surface dielectric constants. The burden is therefore on the applicant to show that the reference polymer does not have the instantly claimed densities and surface dielectric constants necessarily and inherently. The reference is otherwise silent regarding these parameters and the examiner has no way of determining what they are otherwise.

The applicant's arguments have been fully considered but are rebutted by the above statements and the disclosures of the cited prior art. This rejection is therefore maintained.

8. Claims 12-16, 18, 23, 25-30, 32, 37, and 39-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kubota et al. in view of Hawley's Condensed Chemical Dictionary and either Kato et al. or Moffatt et al. as applied to claims 12-15, 17-18, 23, 25-29, 31-32, 37, and 39-40 above, and further in view of either Miyamoto et al. (U.S. 2004/0055508) or Wang et al. (U.S. 2004/0063807).

The difference between Kubota et al. in view of Hawley's Condensed Chemical Dictionary and either Kato et al. or Moffatt et al. and the present claimed invention is the requirement in the claims of silicone surfactant or fluorine surfactant.

Miyamoto et al., which is drawn to ink jet inkl disclose the use of silicone as anti- foaming agent to prevent bubbles from being generated in the ink and/or allowing generated bubbles to disappear (paragraphs 183-184).

Alternatively, Wang et al., which is drawn to ink jet ink, disclose the use of silicone surfactant or fluorinated surfactant in order to control surface tension and thus, the jet velocity, separation length of droplets, drop size, and stream stability of the ink (paragraph 46).

In light of the motivation for using silicone surfactant or fluorinated surfactant disclosed by Miyamoto et al. or Wang et al. as described above, it therefore would have been obvious to one of ordinary skill in the art to use such surfactant in the ink of Kubota et al. in order to produce ink with no foaming or, alternatively, to produce ink with suitable surface tension, and thereby arrive at the claimed invention.

Specifically, applicant argues that Kubota et al. fails to disclose printing ink jet ink comprising polymer encapsulated pigment and acid functionalized colloid particulates dispersed in liquid vehicle having volatile co-solvent wherein the image is heated afterprinting. As evidence to support this position, applicant points to examples of Kubota et al. that show ink comprising polymer encapsulated pigment but wherein such ink is not heated after printing or that show ink that is heated after printing but wherein the ink does not comprise polymer encapsulated pigment.

However, the examples are but a few preferred embodiments of Kubota et al. It is noted,

"applicant must look to the whole reference for what it teaches. Applicant cannot merely rely on the examples and argue that the reference did not teach others," In re Courtright, 377 F.2d 647, 153 USPQ 735,739 (CCPA 1967). Further, "nonpreferred disclosures can be used. A nonpreferred portion of a reference disclosure is just as significant as the preferred portion in assessing the patentability of claims", In re Nehrenberg, 280 F.2d 161,126 USPQ 383 (CCPA i 960). A fair reading of Kubota et al. as a whole clearly discloses ink comprising polymer encapsulated pigment (paragraph 72), acid functionalized colloid particles (paragraphs 102, 112, and 117), and liquid vehicle (paragraphs 162-168) as presently claimed wherein the image formed from such ink is heated after printing (paragraphs 35 and 230).

Applicant also argues that there is no motivation to combine Kubota et al. with Kato et al. given that, as disclosed on page 14, line 30-page 15, line 6 of the present specification, configuring a system including a thermal ink jet ink architecture often requires additional consideration and experimentation of at least selection of ink components. Applicant argues that Kato et al. also disclose the difficulty of working with thermal ink jet architecture.

However, while the present specification discloses that polymer colloid particulates effective for use in piezo ink jet system are not necessarily effective in thermal ink jet systems, firstly, it is noted that given that Kubota et al. disclose ink jet ink identical to that presently claimed, it would have been obvious to one of ordinary skill in the art that such ink would also be suitable for use in thermal ink jet printer as presently claimed. Secondly, it is noted that there is no requirement in Kubota et al. that the ink is suitable for use in piezo ink jet system and thus, one of ordinary skill in the art would not expect that such ink would not be suitable for use in

thermal ink jet system. Additionally, while coi.26, lines 25-28 of Kato et al. disclose that when the ink is used with an ink jet printing method, thermal properties of the ink may have to be regulated, this does not teach against using inks in thermal ink jet system only that they have to be regulated.

While it is agreed that Kato et al. disclose the use of separate liquid composition and ink, however, Kato et al. disclose the use of the ink in a thermal printer and further, the teaching of Kato et al. with respect to the thermal printer, "ink-jet recording method of the type adapted to eject ink by utilizing the foaming phenomenon of ink arises when thermal energy is applied hereto because ink is ejected on a stable basis and no satellite droigs will be produced", appears to refer to the printing apparatus itself not the ink. That is, it is the printer which allows the ink to be ejected on a stable basis and for no satellite drops to be produced. Therefore, it would have been obvious to one of ordinary skill in the art to utilize ink, including that disclosed by Kubota et al., in such thermal ink jet printer, in order to stably print ink and produce no satellite dots, and thereby arrive at the claimed invention.

The recitations regarding surface acid groups would be necessarily expected of the polymers of the reference in the above discussed aqueous phase. The ionic/hydrophilic groups of dispersions orient toward the hydrophilic aqueous phase and the hydrophobes orient away from the hydrophilic aqueous phase as is well known and established in aqueous dispersion arts. Thus, the acid groups of the reference polymer are expected to necessarily and inherently give the instantly claimed surface acid groups. The PTO has no facilities to make such experimental determinations. The burden is therefore on the applicant to show that the reference polymer does

not have such surface acid groups necessarily and inherently. The newly presented claims 41-44 present limitations that appear to be a function of the polymer type and identity of the examined claims. The densities appear typical of organic polymers. The ionic surfaces of the acid functional polymers will be conductive due to the ions on them which will necessarily and inherently give very low surface dielectric constants. The burden is therefore on the applicant to show that the reference polymer does not have the instantly claimed densities and surface dielectric constants necessarily and inherently. The reference is otherwise silent regarding these parameters and the examiner has no way of determining what they are otherwise.

The applicant's arguments have been fully considered but are rebutted by the above statements and the disclosures of the cited prior art. This rejection is therefore maintained.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick D. Niland whose telephone number is 571-272-1121. The examiner can normally be reached on Monday to Thursday from 10 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached on 571-272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patrick D Niland
Primary Examiner
Art Unit 1796